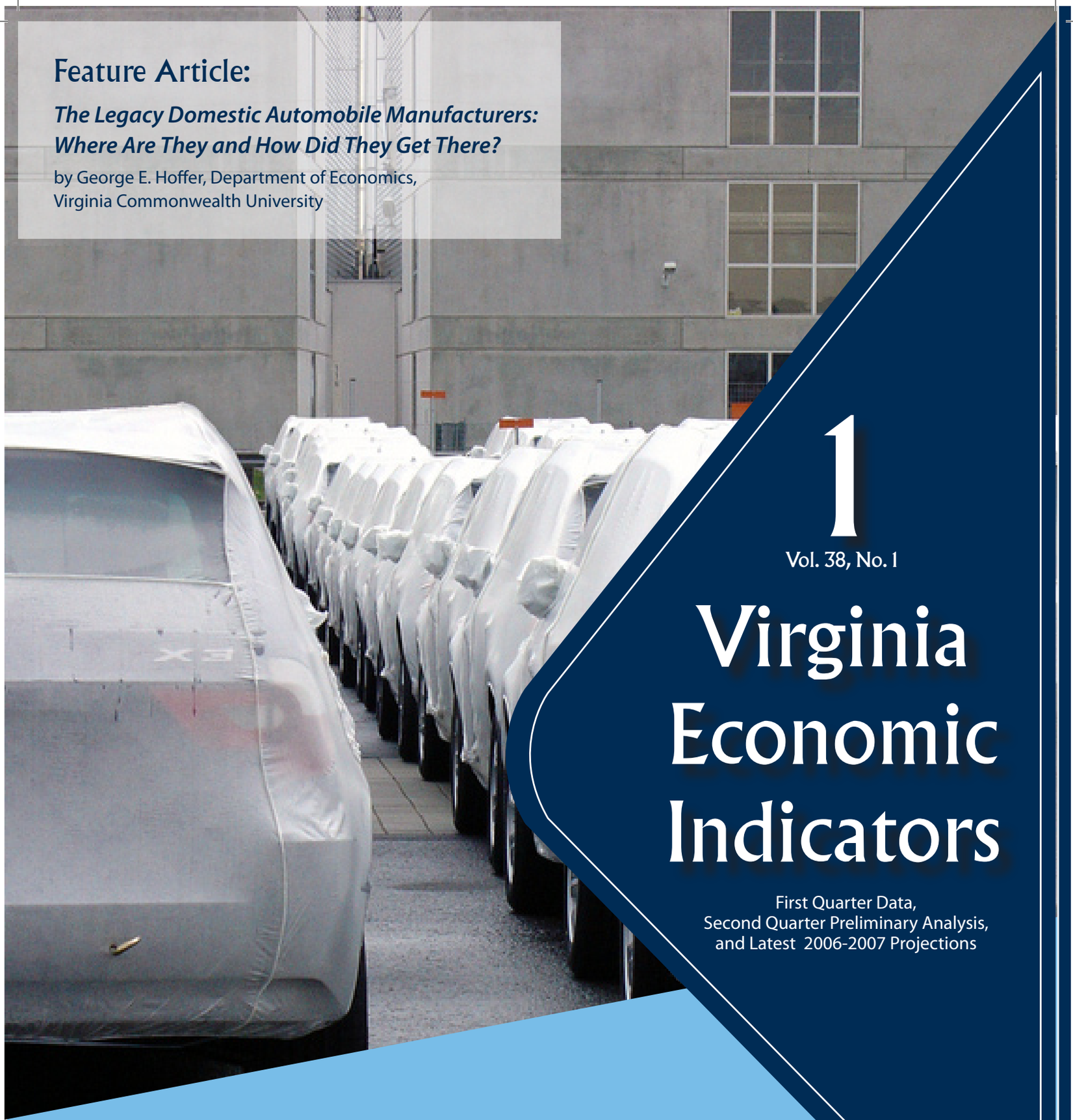

Feature Article:

The Legacy Domestic Automobile Manufacturers: Where Are They and How Did They Get There?

by George E. Hoffer, Department of Economics,
Virginia Commonwealth University

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Vol. 38, No. 1

Virginia Economic Indicators

First Quarter Data,
Second Quarter Preliminary Analysis,
and Latest 2006-2007 Projections

Virginia Employment Commission • Economic Information Services Division

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First Quarter Data,
Second Quarter Preliminary Analysis,
and Latest 2006-2007 Projections

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Contents

Foreword

For those who are interested in studying the business cycle, the *Virginia Economic Indicators* publication is designed to depict the movement of the key economic indicator series readily available in Virginia. Most of these series are published elsewhere; but here, they are brought together in both graphic and tabular form, under one cover, and grouped so that they may be analyzed and interpreted easily.

Ten of the fourteen series currently used—the two employment series, the four unemployment series, and the four hours and earnings series—are produced in-house by the Economic Information Services Division of the Virginia Employment Commission and are comparable to similar national series produced by the U.S. Department of Labor. The four business indicators are provided by sources outside of the agency (see the Historical Summary at the back of this publication for data sources) and should prove useful to the student of business cycle development in Virginia.

All series currently published in the *Indicators* have been seasonally adjusted to minimize regular seasonal fluctuations in the data in order to show only activity related to the business cycle. The *Virginia Economic Indicators* is currently the only seasonally adjusted publication of some of the Virginia series.

From time to time, new series will be added to this report as the data becomes available and is collected and tested. Also, series presently provided, if necessary, may be discontinued. Historical graphs are published in the back of the fourth quarter issue for each year.

This publication provides a narrative analysis update of the U.S. economy, a narrative analysis of recent changes in Virginia, and highlights of both economies. Also, feature articles dealing with some currently important aspects of the Virginia economy are presented. Feature articles are written in-house or by guest authors knowledgeable on particular economics-related subjects.

This publication is normally produced quarterly in March, June, September, and December, but data in the series is provided on a monthly basis. There is a time lag of one quarter before all the data series are available for publication and analysis.

With the 2002 benchmarks in 2003, all states were required to switch to the North American Industry Classification System (NAICS) codes which replace the Standard Industrial Classification (SIC) codes formerly used. The NAICS conversion affects the factory employment series and the four hours-and-earnings series in that, where 2001, 2002, 2003, 2004, 2005, and 2006 data has been revised to NAICS, data prior to this time is still on the old SIC basis with more manufacturing industries. This means a slight break in these series when comparisons are made with former periods prior to 2001.

The main change to manufacturing is that, under NAICS, newspapers and publishing houses are no longer included in manufacturing, and so their employment and earnings are missing from revised 2001, 2002, 2003, 2004, 2005, and 2006 data.

Significant advances in printing technologies and the competitive bidding process allowed the production of the current format with its enhancements on an annual contract basis at a substantial cost savings over the previous process and format.

Production and distribution of the *Virginia Economic Indicators*, like most Virginia Employment Commission projects, are financed through specifically-earmarked U.S. Department of Labor grants and do not use Virginia state funding sources.

We welcome any comments, suggestions, or questions concerning *Virginia Economic Indicators*.

Please address your comments to:

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For additional information or explanation of the contents of this document, you may contact the Economic/Operations Research section at (804) 786-5669. You may also view the publication in its entirety at **http://velma.virtuallmi.com > Products > Publications.**

Highlights - The U.S. and Virginia Economies

The U.S. economy in First Quarter 2006 was just the reverse of Fourth Quarter 2005—as exuberant as the fourth quarter was lackluster. The economy grew 5.6 percent in the first quarter versus only a 1.7 percent rate of increase in last year's final quarter. Consumers were having "one last fling" before rising home prices and mortgage rates caused home affordability to slip out of their reach and skyrocketing fuel prices curtailed other purchases. Business spending and federal government spending were both up sharply in the first quarter as businesses expanded to stay competitive and the federal government provided hurricane relief and prepared to launch the new drug program for seniors. The good economy reduced unemployment to a five-year low of 4.7 percent. After the first quarter's exuberance, higher oil prices and interest rates will be slowing growth in 2006 and cause the economy to achieve a soft landing in 2007.

Virginia also experienced a strong first quarter with consumers in a "buying mood." January was the best month before fuel prices started to rise again. Virginia saw the following new records set in the first quarter:

- Nonagricultural employment reached new highs each month of 3,716,900 in January; 3,718,700 in February; and 3,721,300 in March.
- Hourly factory wages climbed to $16.77 in February and $16.79 in March.
- Taxable retail sales hit $8,436 million in January and $8,637 million in March.

Virginia saw average annual job growth in the first quarter of 2.2 percent, which was considerably faster than the nation's average job creation rate of 1.6 percent in the similar period. Virginia's seasonally adjusted unemployment rate averaged only 3.0 percent in the first quarter, giving the state the lowest jobless rate in the continental U.S. both in January and February with only Hawaii being lower. Six of Virginia's ten metropolitan areas added jobs faster than the 2.2 percent state rate of increase, and all but two areas grew faster than the 1.6 percent U.S. job creation rate. Northern Virginia, Richmond, and Hampton Roads consistently ranked in the 10-best unemployment areas of the 50-largest areas in the country; and Charlottesville and Harrisonburg consistently ranked among the 10 best unemployment areas of all the nation's 367 metropolitan areas.

The Consumer Price Index for the United States for All Urban Consumers (CPI-U) averaged 198.9 (1982-84=100) in First Quarter 2006. This average was 0.5 percent higher than the 197.9 Fourth Quarter 2005 average. The First Quarter 2006 average was 3.6 percent above the First Quarter 2005 average of 191.9, largely reflecting escalating fuel prices.

According to the Bureau of Labor Statistics of the U.S. Department of Labor, productivity rose 3.7 percent in the nonfarm business sector during First Quarter 2006, as output increased 6.5 percent and hours of all persons increased 2.7 percent. The hours increase was larger than during any quarter in 2005. In Fourth Quarter 2005, nonfarm productivity had declined 0.3 percent as output rose 1.5 percent and hours increased 1.8 percent. Hourly compensation increased 5.3 percent in First Quarter 2006. After revision, this measure decreased at a 0.9 percent annual rate in Fourth Quarter 2005—the first decline in nonfarm hourly compensation since 1994, when it fell 0.8 percent in the second quarter and 0.3 percent in the third quarter. When the rise in consumer prices is taken into account, real hourly compensation rose 3.2 percent in the first quarter and fell 4.1 percent in the fourth quarter. Unit labor costs grew 1.6 percent during First Quarter 2006, following a 0.6 percent decline in Fourth Quarter 2005, as revised. The implicit price deflator for nonfarm business output rose by 2.9 percent in First Quarter 2006.

Both the nation and Virginia experienced an exuberant first quarter.

According to the Energy Information Administration of the U.S. Department of Energy, Virginia's First Quarter 2006 coal production of 7,359,000 short tons mined was 1.3 percent above the 7,265,000 short tons mined in First Quarter 2005.

William F. Mezger
Chief Economist
Virginia Employment Commission

U.S. Economic Outlook

Forecast Update—First Quarter Data, Second Quarter Preliminary Analysis, and Latest 2006-2007 Projections

William F. Mezger
Chief Economist

Gross Domestic Product (GDP) growth averaged 3.5 percent for all of 2005 in spite of an anemic 1.7 percent growth rate in the fourth quarter in the aftermath of 2005's devastating hurricanes and in the face of steadily rising interest rates threatening to cool the booming housing and consumer markets. (GDP is the sum of all the goods and services produced in the U.S. and is the key measure of economic gain or loss.) Also, neither business nor federal government spending was up to par in the fourth quarter; and the 2005 holiday season was ho-hum with no one product igniting consumers' desires, and the widespread use of gift cards shifted the recording of sales figures ahead to the future when the cards are redeemed.

First Quarter 2006 is as exuberant as Fourth Quarter 2005 was lackluster.

The First Quarter 2006 was just the reverse of Fourth Quarter 2005—as exuberant as the fourth quarter was lackluster. GDP growth was a super good 5.6 percent rate of expansion!

- Consumers were having "one last fling."
  - Home buyers were trying to get in under the wire of lower cost mortgages before home "affordability" slipped out of their reach with rising interest rates and home prices. Housing starts bounced up to 2.13 million units from 2.06 million units in Fourth Quarter 2005. First quarter housing starts were also aided by dry, relatively mild winter weather throughout much of the U.S.
  - Light vehicle sales spiraled up to 16.9 million units from 15.9 million units in the fourth quarter as the vehicle manufacturers once again offered financing incentives, like zero percent financing, to pump up flagging sales.
  - Consumers who had received the popular store gift cards during the 2005 holiday season cashed them in with the sales being registered when the cards were redeemed in the first quarter.

- Businesses resumed spending at a 14.2 percent annual rate of increase In the first quarter versus a 4.5 percent rate of gain in 2005's final quarter. High utilization rates and the need to stay competitive were now significantly boosting business spending.
- Federal government spending increased at a double-digit rate after being down 2.6 percent in the fourth quarter as federal agencies had feared to make spending commitments before a final federal budget was reached. By first quarter, there was a budget agreement and spending for hurricane repair and relief and to launch the new Medicare prescription drug program.
- Nationally, there was enough job creation to bring the unemployment rate down to 4.7 percent in the first quarter, a five-year low.

Now that First Quarter 2006 is behind us, U.S. economic growth is already slowing with high oil prices (around $70 per barrel), adding to the burden of stretched consumers (especially at the low end of the economic scale). The latest U.S. forecast is as follows with slowing growth in 2006 and the economy achieving a soft landing in 2007:

Percent (except as noted)		
	2006	2007
Real GDP	3.4	2.6
Consumer Spending (Real)	3.1	2.7
Business Investment (Real)	9.4	6.6
Federal Government Spending (Real)	3.1	0.6
Housing Starts (Million Units)	1.91	1.75
Existing Home Sales (Million Units)	6.46	5.89
Light Vehicle Sales (Million Units)	16.6	16.5
Nonagricultural Employment	1.5	1.3
Unemployment Rate (Levels)	4.7	4.9

The baseline forecast probability is 55 percent.

- In addition to around $3.00 per gallon gasoline prices knocking the wind out of consumers' sails is the fact that residential construction for now has become a drag on GDP growth for the first time in more than four years. Recent rises in housing prices have made mortgage payments unaffordable for average income earners in many markets, especially in the western U.S. In addition to builders cutting back, a slower rate of home price appreciation will lower consumer spending to less than the growth rate of disposable income as many consumers had been cashing in on the equity built up in their homes and using it to make other purchases.

Spending by consumers, of course, makes up the largest portion of GDP, but helping to offset some of the loss will be:

- Spending growth by the business sector will help to somewhat negate the consumer spending and housing slowdowns. Businesses with cash reserves built up in 2004 and 2005 are being forced to spend because of high utilization rates and the need to remain competitive. The resulting rise in nonresidential construction will help the building industry through the slower housing market.
- The strong growth recently in the economy has helped with the federal budget deficit. Even with the hurricane rebuilding and the launch of the new Medicare prescription drug program, the increased tax revenues are lowering the federal deficit by about $18 billion for Fiscal Year 2006.
- U.S. export gains are expected to be close to double-digit in 2006 and 2007 because of better world economic growth and a declining U.S. dollar value.
- U.S. employment growth will slow with the economy, pushing joblessness back to 4.9 percent in 2007.
- Rises in fuel and other commodity prices have now pushed core inflation above the Federal Reserve's "tolerance band" of 2.0 percent. New Federal Reserve chairman

Ben Bernanke has taken over the reins at a difficult time. The Federal Reserve is increasingly worried about the rise in core inflation, but it is also worried about tightening the Fed Funds rate too much and sending the housing market into a nosedive. It now looks like the Federal Reserve will go to a 5.50 percent Fed Funds rate at its August 2006 open-market committee meeting before ceasing the interest rate rise that began in June 2004. By 2007, if the inflation threat diminishes, the Federal Reserve may slightly back off on the Fed Funds rate.

The economic forecast now is for slowing growth in 2006 and a soft landing in 2007.

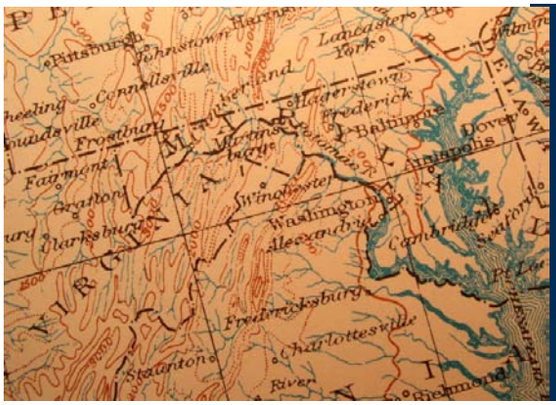
- It now looks like oil prices will stay near $70 per barrel for most of 2006 because of high world demand and political instability. Oil may edge down to about $66 per barrel by 2007 as more supply becomes available.

Alternate Scenarios

- In the higher growth scenario, GDP growth continues in the upper-3 to 4 percent range as new technologies boost productivity and keep inflation and budget deficits lower (probability 20 percent).

- Stagflation settles in because of more inflation, and the Federal Reserve's actions to combat inflation cause stagflation to stay for years (probability 25 percent).

June 30, 2006



Virginia Indicators

First Quarter 2006 Data

William F. Mezger
Chief Economist

Like the nation, Virginia experienced a very strong First Quarter 2006 after a lackluster Fourth Quarter 2005. Consumers were in a "buying mood" here, especially early in the quarter, before fuel prices again started to rise sharply. Mild, dry first quarter weather boosted employment and building activities, and there were few winter weather-related work stoppages to increase claims activities. At the first of the year, there was a rush of home buyers trying to get under the wire before rising mortgage rates shut them out. The redemption of the large number of store gift cards given during the 2005 holiday season boosted first quarter retail sales, because these sales are not recorded until the cards are redeemed. On the downside in the first quarter, rising fuel prices began to cause consumers to curtail other purchases; and First Quarter 2006 did not benefit from Easter holiday shopping and travel, which did not come until April this year. Also, vehicle and vehicle parts assemblers had some off-week furloughs.

The fourteen series used to measure the Virginia economy that are the only series on Virginia for which data is available, performed as follows in First Quarter 2006.

- January was the best month with nine series up, two unchanged, and three down.
- February saw six series up, four unchanged, and four down.
- March was beginning to show the impact of rising fuel costs with five series up, five unchanged, and four down.

The first quarter saw the following records set:

- Nonagricultural payroll employment reached new all-time high levels each month of the quarter, being 3,716,900 in January; 3,718,700 in February; and 3,721,300 in March.
- Hourly production wages posted new highs of $16.77 in February and $16.79 in March.
- Taxable retail sales reached highs of $8,436 million in January and $8,637 million in March.
- Also, the total unemployment rate, insured unemployment rate, and final payments recorded some of the best figures in the last five years. New business incorporations were second best ever in January.

First Quarter 2006 is a very good period in Virginia, also.

The six-month moving average of rising indicators on page 17 serves to illustrate the quarter's performance. The moving average enhances analysis because it smoothes out much of the irregularity present in many of the individual series.

As we go to press, it looks like, as in the nation, economic growth

in Virginia will also moderate some because of high fuel prices, rising interest rates, a cooling housing market, and more inflation. Virginia, however, may escape the "soft landing" expected for the national economy in 2007 because of all the extra activities generated by the big 400th anniversary of Jamestown celebration that will be going on here for the next year-and-a-half. Even with the high fuel prices now expected, Virginia's close proximity to the populous Northeast and Mid-West should mean many travelers from those regions should be attending all the Jamestown-related festivities and activities going on here.

Second quarter 2006 saw the final closeout of Dan River Mills in Danville, Virginia, one of the state's oldest textile mills, and several plant shutdowns in the Galax area; but off-week furloughs in the vehicle and vehicle parts industry were considerably diminished from the first quarter. May saw Virginia record the lowest state unemployment rate in 5 years—2.9 percent on a seasonally unadjusted basis.

Around the State

Virginia saw average annual job growth in First Quarter 2006 at a rate of 2.2 percent, which was considerably faster than the nation's average annual first quarter job creation rate of 1.6 percent. After having the third-best unemployment rate average for 2005 at 3.5 percent, Virginia was even more impressive in the first quarter with an average of only 3.0 percent seasonally adjusted joblessness. In January and February, only Hawaii, at 2.4 percent and 2.5 percent, respectively, had lower unemployment than Virginia's 3.0 percent for both periods. It could be said that in both January and February, Virginia had the lowest unemployment rate in the continental U.S. By March, Virginia's seasonally adjusted 3.1 percent jobless rate was bettered by only two states, Hawaii at 2.6 percent, and Wyoming at 2.9 percent.

In the first quarter, six of Virginia's ten metropolitan areas—Charlottesville, Winchester, Virginia/West Virginia, Northern Virginia, Blacksburg-Christiansburg-Radford, Roanoke, and Lynchburg—saw job growth faster than the 2.2 percent statewide average rate of gain. All Virginia areas but Harrisonburg and Danville grew faster than the 1.6 percent U.S. rate of gain in the similar period. The three biggest metropolitan areas—Northern Virginia, Richmond, and Virginia Beach-Norfolk-Newport News, Virginia/North Carolina—consistently ranked in the ten-best unemployment areas of the nation's 50 areas with over one-million population. Charlottesville and Harrisonburg consistently ranked among the ten-best unemployment areas of all the nation's 367 metropolitan areas.

- **Charlottesville** was the fastest growing-metropolitan area with 5.8 percent annual average job gain in the first quarter. Growth generated by the large University of Virginia and the university hospital and all the professional and support industries that go along with these institutions were rapidly propelling the Charlottesville economy forward. Leisure and hospitality and construction were also forging ahead. A 2.5 percent first quarter unemployment rate put Charlottesville among the half-dozen best of the nation's 367 metropolitan areas.

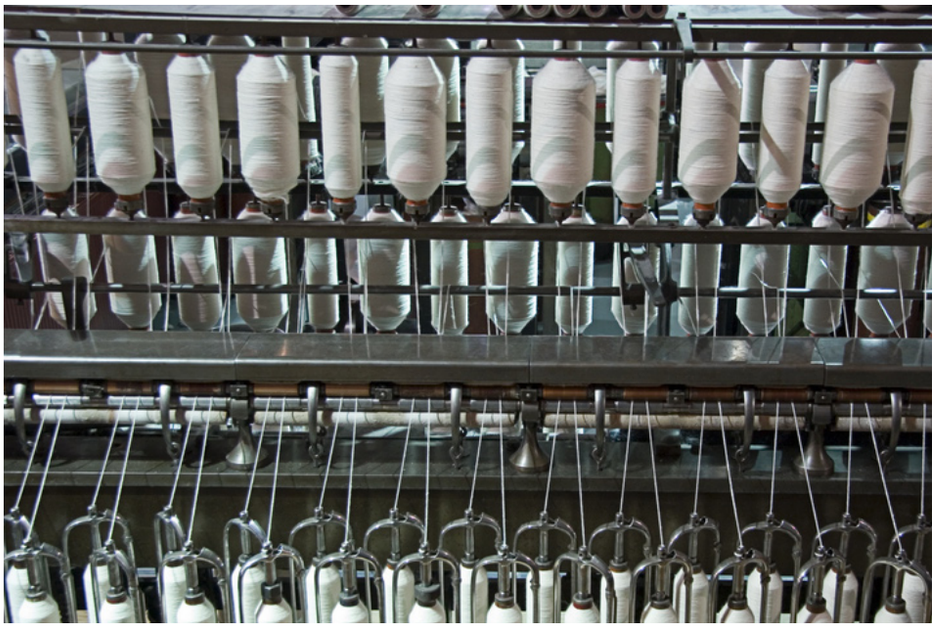
- **Winchester, Virginia/West Virginia** experienced 4.8 percent annual average job growth led by its service industries, which have now taken on a character similar to those same industries in its large and prosperous neighbor to the east—Northern Virginia. The slightly colder weather that Winchester's location experienced in the first quarter bumped unemployment up to a 2.9 percent average rate, which still ranks it among the nation's 30-best areas out of 367. Winchester usually does better than that the rest of the year.
- **Northern Virginia,** about the world's best job market in both quality and quantity grew at a 3.7 percent rate in the first quarter, led as usual, by its high-skill, high-wage professional and business services industry. Also booming were trade, construction, and health care. Northern Virginia was providing about 58 percent of *all* the new jobs in Virginia in the first quarter. Northern Virginia averaged a 2.3 percent unemployment rate in the first quarter, giving it about the lowest metropolitan unemployment rate in the

country, if Northern Virginia were treated as a separate metropolitan area in the national statistics, rather than part of the larger Washington-Arlington-Alexandria, DC-VA-MD-WV metropolitan area.

- **Blacksburg-Christiansburg-Radford** added jobs at a 2.6 percent rate in the first quarter, led by its Virginia Tech/Radford University complex and their support industries. The New River Valley region's significant manufacturing base is now adding workers with few off-week furloughs in the first quarter. Unemployment averaged 3.4 percent, not at all bad for an area with a fairly heavy concentration of factory employment.
- The **Roanoke** region grew at a 2.5 percent rate of job gain in the first quarter, spearheaded by private education and health care, professional and business services, and trade and transportation—the functions Roanoke has traditionally provided for the rest of Southwest Virginia. Construction and finance have also seen gains, and manufacturing is holding its own. Unemployment averaged only 3.1 percent this quarter.
- **Lynchburg** added jobs at a 2.4 percent annual average rate in the first quarter. The private colleges and their support industries give a boost to the Lynchburg economy similar to that which the University of Virginia complex provides to Charlottesville and Virginia Tech/Radford University provide to Blacksburg-Christiansburg-Radford. Trade, construction, and manufacturing are also adding to the job growth. Unemployment averaged 3.4 percent in this quarter with an occasional factory off-week.
- **Richmond** experienced 2.1 percent first quarter job gain led by professional and business services and education and health care. The developing Bio-Tech research park is helping to make Richmond even more of a health care center for the upper south. With downtown and riverfront development, there is much construction activity. Unemployment averaged 3.4 percent this quarter, putting the Richmond area in the half-dozen best large metropolitan areas in the country for unemployment.
- **Virginia Beach-Norfolk-Newport News, Virginia/North Carolina** saw 1.7 percent annual average job growth in the early months of 2006. Construction is booming as this area readies itself for the 2007 Jamestown celebration. The important leisure and hospitality industry is also seeing good growth as it prepares for Jamestown 2007. Growth has now plateaued in the military and defense-related industries. Vehicle assembly had some off-week furloughs this quarter. Unemployment averaged 3.7 percent with the usual comings-and-goings of military dependants. The 3.7 percent jobless rate was good enough to keep Hampton Roads in the ranks of the 10-best 50-largest U.S. metropolitan areas.
- **Harrisonburg** gained jobs at an 0.8 percent first quarter rate as James Madison University expands like Virginia's other public higher education institutions and jobs are added in distribution. Although growing again, the area figures are still influenced by a previous poultry manufacturing closing. The unemployment average remains very low at 2.6 percent, putting Harrisonburg in the 10-best of the nation's 367 metropolitan areas.
- **Danville** remains the weakest of Virginia's metropolitan areas with a 2.9 percent first quarter annual average job *loss.* Final phases of the Dan River Mills' closing are reflected in this

quarter's numbers. The service-providing industries, however, remain slightly positive. The factory problems caused first quarter unemployment to average 8.3 percent.

Besides Danville, the **Covington** and **Galax** areas remain Virginia's other trouble spots at this time with job losses in furniture, textiles,



and auto parts manufacturing. First quarter unemployment averaged 6.6 percent in the Covington area and 5.9 percent in the Galax area. **Martinsville**, Virginia's worst unemployment area in several recent past years is now growing with a *marked improvement* in joblessness.

For the immediate future, it is expected that trends already present in the metropolitan areas will continue. Charlottesville, Winchester, Northern Virginia, and Blacksburg-Christiansburg-Radford should see the fastest job growth with the large Northern Virginia area still adding the largest total number of new jobs. The Jamestown celebration should give a big boost to tourism throughout the state, but the Virginia Beach-Norfolk-Newport News, Virginia/North Carolina and Richmond areas should benefit the most from these activities. Technology advancements will be most pronounced in the largest areas, and Richmond, Charlottesville, and Roanoke, especially, should benefit from health care gains. The job growth rate should improve in Harrisonburg. Danville and other Southside areas need to recover from plant closings, but the worst may already be over. Virginia and many of its metropolitan areas are expected to continue to have some of the lowest unemployment rates in the nation.

Good Weather, the Rush to Beat Rising Interest Rates, and Redemption of 2005 Holiday Gift Cards All Boost the First Quarter Virginia Economy

First Quarter 2006 was a relatively good period for the two employment series with total nonfarm employment achieving new highs each month of the quarter and factory employment stabilizing just above December 2005's all-time low of 294,600. Nonagricultural wage and salary employment increased each month of the quarter, being up by 29,600 in January, 1,800 in February, and 2,600 in March. While only the January increase was more than the 18,000 jobs, or 0.5 percent, required to register change on our tables on pages 16-17, new record-high levels of 3,716,900 in January; 3,718,700 in February; and 3,721,300 in March were set. Factory employment increased 1,100 in January from December 2005's all-time low of 294,600, fell back by 100 in February, but then gained 1,400 in March to 297,000, manufacturing's highest job level in ten months. None of the first quarter factory changes were plus, or minus, 0.5 percent, the amount necessary to show change on our tables.

The four unemployment-related series, on a seasonally adjusted basis, were mostly negative in January, mostly positive in February, and mixed in direction in March. The total unemployment rate fell from 3.3 percent in December to 3.0 percent in January, an almost five-year low, and stayed at 3.0 percent for February before rising slightly to 3.1 percent for March. Average weekly initial claims for jobless benefits rose from December's 4,293, the second-lowest level on record, to 5,168 in January, fell to 4,657 in February, then were back up to 4,899 for March. Both January and

February saw off-week furloughs in vehicle and vehicle parts production. The insured unemployment rate (the ratio of claimants to those eligible to draw benefits) rose from 0.85 percent in December to 0.97 percent in January, were back to 0.86 percent in February, then fell to 0.79 percent in March, the lowest level in over five years. Final payments for unemployment insurance (which, to some extent, reflect layoffs 6 months previous) rose from December's 2,869 to 3,380 in January, then fell back to 3,141 in February, and 2,746 in March, a 4 ½ -year low.

The four production worker hours and earnings series were mostly positive in January, but then were somewhat inconclusive after that. The length of the production workweek strengthened from 41.5 hours in December 2005 to 41.7 hours in January, but then fell back to 41.0 hours for February, and remained at that level for March. Total production hours, as usual, followed a somewhat similar pattern to the workweek, rising from 9,444,000 in December to 9,546,000 in January, falling to 9,397,000 in February, but then recouping to 9,456,000 in March. The hourly production pay rate climbed from $16.42 in December to $16.45 in January, then set new records of $16.77 in February and $16.79 in March. Average weekly factory pay advanced from $681.06 in December to $685.65 in January and $692.24 in February, but the shorter March workweek dropped average weekly compensation to $690.31.

The four business-related series after being all positive in January were mixed for the rest of the quarter. Single family housing permits were pretty good all quarter, rising from 3,807 in December to 3,916 in January and 4,116 in February, before trailing off only slightly to 3,981 in March. Mild, dry first quarter weather and people trying to get into the housing market before financing rates rose higher were factors in keeping home building strong in Virginia. New business incorporations climbed from 1,687 in December to a second-best-ever 2,001 in January, fell back to 1,606 in February, and then increased to 1,821 in March. New light vehicle registrations were up from 40,323 in December to 48,360 in January and an almost as good 48,009 in February; but by March, rising fuel prices reduced them to 45,798 in spite of the manufacturers once again offering financing incentives. As a result of store gift cards sold in December not being counted as sales until they were redeemed in January, taxable retail sales rose from $8,178 million in December to a record $8,436 million in January. Taxable retail sales at $8,413 million were almost as good in February and were boosted to another record of $8,637 million in March in spite of rising fuel prices and the Easter holiday being in April in 2006.

Virginia job growth significantly outpaced the nation, and Northern Virginia, in both quality and quantity, was one of the world's best job markets. For much of the first quarter, Virginia had the lowest jobless rate in the continental U.S.

Employment Indicators

January 2005 to March 2006

	Nonagricultural Wage and Salary Employment* (Thousands)		Manufacturing Employment* (Thousands)		Total Unemployment Rate* (Percent)	
2005	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
January	3,573.4	3,630.4	297.1	298.3	3.8	3.4
February	3,588.8	3,642.3	296.9	298.2	3.8	3.3
March	3,614.4	3,639.5	296.8	297.6	3.6	3.4
April	3,651.6	3,657.1	296.7	297.7	3.4	3.5
May	3,672.0	3,656.6	296.6	297.5	3.5	3.5
June	3,701.8	3,660.8	297.3	296.6	3.7	3.6
July	3,666.2	3,671.7	294.7	296.7	3.5	3.5
August	3,669.7	3,678.2	296.5	296.0	3.5	3.6
September	3,701.1	3,691.1	295.8	294.8	3.5	3.6
October	3,725.1	3,707.3	296.0	295.1	3.1	3.5
November	3,732.4	3,700.6	296.2	294.6	3.2	3.4
December	3,722.3	3,687.3	296.2	294.6	3.0	3.3
2006						
January	3,658.5	3,716.9	294.5	295.7	3.3	3.0
February	3,664.0	3,718.7	294.3	295.6	3.3	3.0
March	3,695.6	3,721.3	296.2	297.0	3.2	3.1

* These series have been adjusted to First Quarter 2005 benchmarks.

Unemployment Insurance Indicators

January 2005 to March 2006

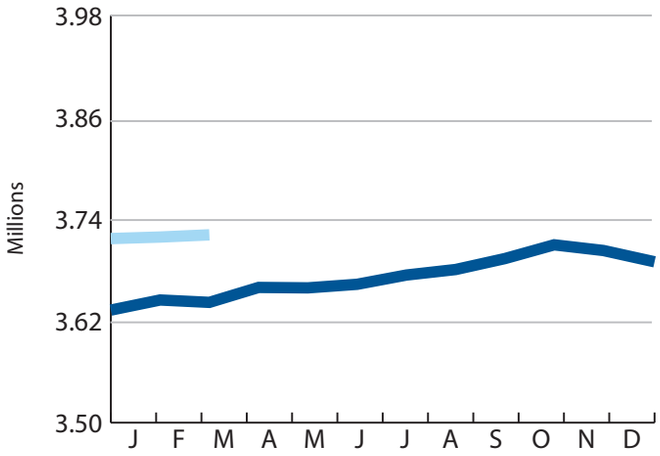
	Average Weekly Initial Claims*		Insured Unemployment Rate (Percent)		Unemployment Insurance Final Payments	
2005	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
January	7,736	5,413	1.25	1.04	3,350	3,443
February	5,031	5,182	1.13	0.97	3,172	3,468
March	4,853	5,516	1.02	0.93	4,283	3,796
April	4,243	5,140	0.88	0.91	3,588	3,131
May	4,235	5,215	0.94	0.98	3,258	3,224
June	4,668	5,011	0.87	0.89	3,936	3,546
July	5,834	5,283	0.93	0.95	3,101	2,870
August	3,942	4,863	0.85	0.94	3,620	3,448
September	4,147	4,747	0.76	0.88	2,670	3,113
October	4,054	4,566	0.82	0.94	2,493	2,810
November	4,541	4,693	0.84	0.88	2,953	3,208
December	6,453	4,293	0.91	0.85	2,659	2,869
2006						
January	7,387	5,168	1.16	0.97	3,288	3,380
February	4,521	4,657	1.00	0.86	2,873	3,141
March	4,310	4,899	0.87	0.79	3,099	2,746

* December 2005 initial claims are corrected from the last issue.

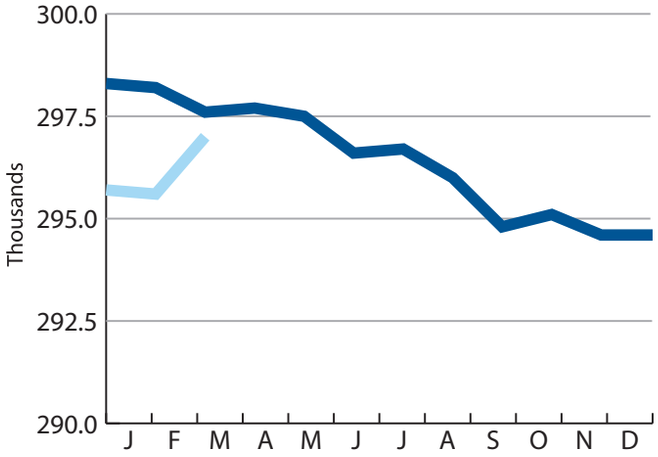
Employment Indicators

January 2005 to March 2006

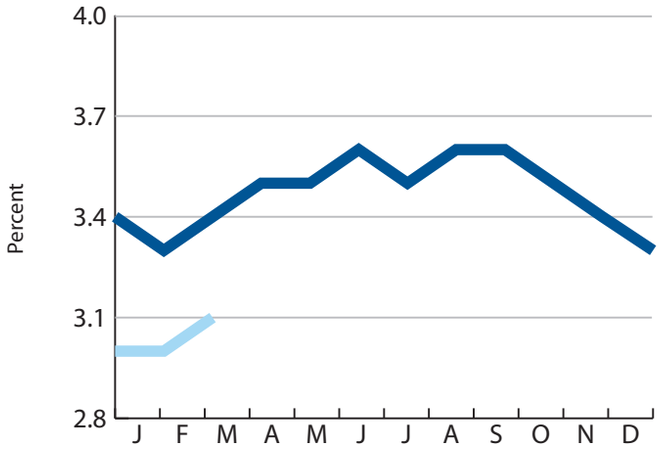
Nonagricultural Wage and Salary Employment



Manufacturing Employment



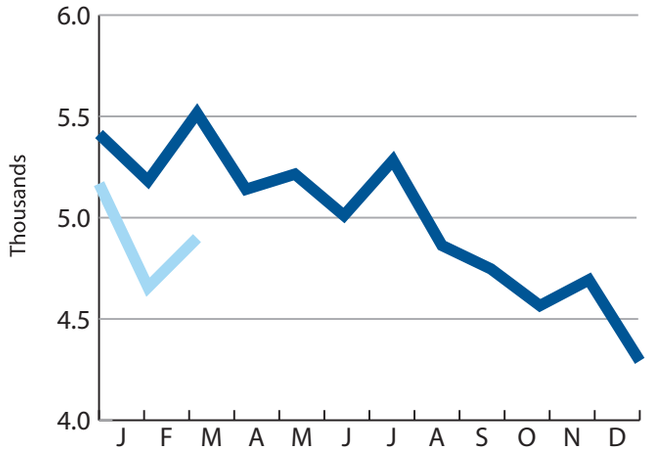
Total Unemployment Rate



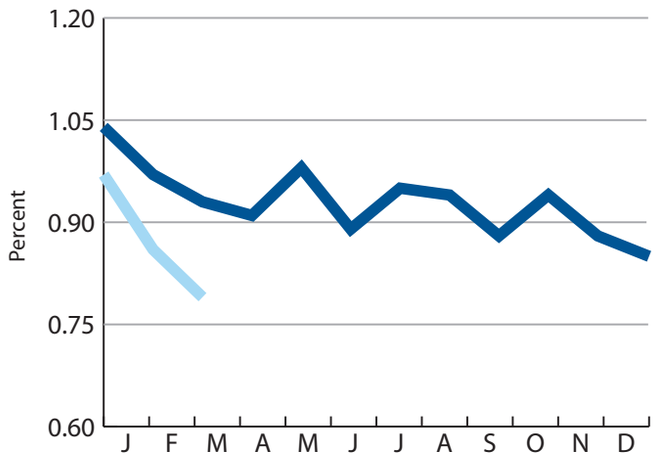
Unemployment Insurance Indicators

January 2005 to March 2006

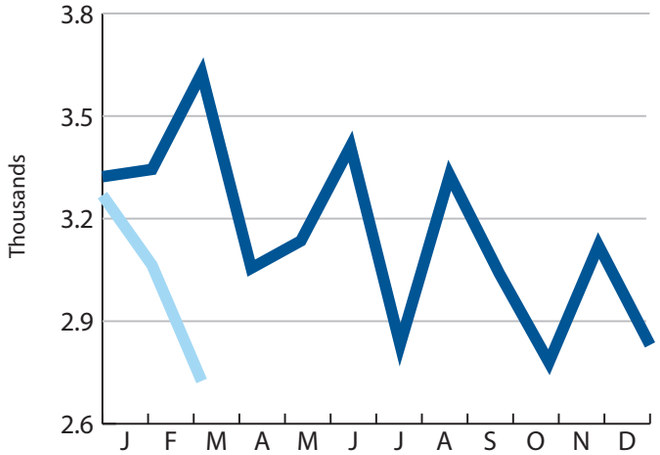
Average Weekly Initial Claims



Insured Unemployment Rate



Unemployment Insurance Final Payments



2005 2006

Manufacturing Production Worker Indicators

January 2005 to March 2006

	Average Weekly Hours*		Average Hourly Earnings* (Dollars)		Deflated Average Hourly Earnings* (1982-84 Dollars)	
2005	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
January	41.6	41.6	16.27	16.22	8.73	8.67
February	41.7	41.8	16.29	16.36	8.70	8.71
March	40.8	41.0	16.19	16.25	8.58	8.64
April	41.5	41.9	16.40	16.34	8.62	8.64
May	41.3	41.0	16.29	16.33	8.57	8.61
June	41.3	40.9	16.35	16.36	8.60	8.62
July	40.3	41.1	16.48	16.55	8.63	8.68
August	40.4	40.5	16.42	16.54	8.55	8.59
September	42.3	42.6	16.53	16.50	8.48	8.49
October	41.8	41.5	16.45	16.47	8.43	8.45
November	41.3	41.0	16.44	16.44	8.50	8.48
December	42.1	41.5	16.64	16.42	8.64	8.47
2006						
January	41.7	41.7	16.50	16.45	8.51	8.44
February	40.9	41.0	16.70	16.77	8.60	8.61
March	40.8	41.0	16.73	16.79	8.57	8.62

* These series have been adjusted to First Quarter 2005 benchmarks.

Manufacturing Production Worker Indicators (continued)

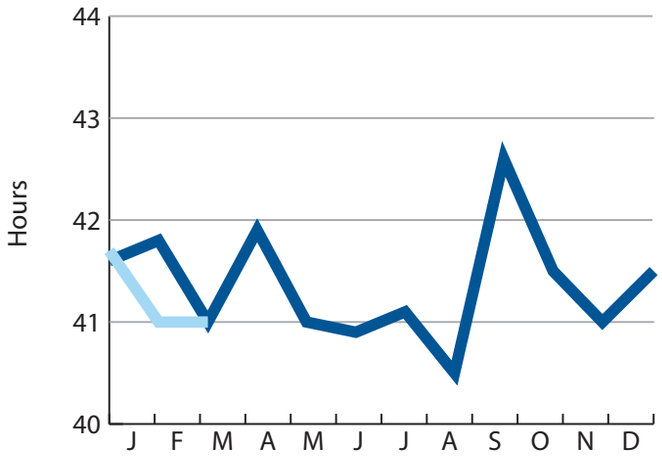
January 2005 to March 2006

	Total Production Hours* (Thousands)		Average Weekly Earnings* (Dollars)		Deflated Average Weekly Earnings* (1982-84 Dollars)	
2005	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
January	9,518	9,549	676.83	674.47	363.30	360.24
February	9,541	9,598	679.29	688.45	362.67	367.49
March	9,343	9,411	660.55	668.03	350.24	353.42
April	9,474	9,560	680.60	681.08	357.83	359.60
May	9,449	9,405	672.78	667.24	354.09	352.19
June	9,466	9,369	675.26	665.94	355.21	351.24
July	9,136	9,413	664.14	678.66	347.72	355.18
August	9,227	9,272	663.37	674.23	345.33	350.58
September	9,653	9,633	699.22	704.15	358.57	362.01
October	9,555	9,482	687.61	685.21	352.26	351.63
November	9,449	9,348	678.97	672.05	351.07	348.42
December	9,641	9,444	700.54	681.06	363.92	351.14
2006						
January	9,516	9,546	688.05	685.65	354.66	351.68
February	9,342	9,397	683.03	692.24	351.71	356.38
March	9,388	9,456	682.58	690.31	349.50	352.68

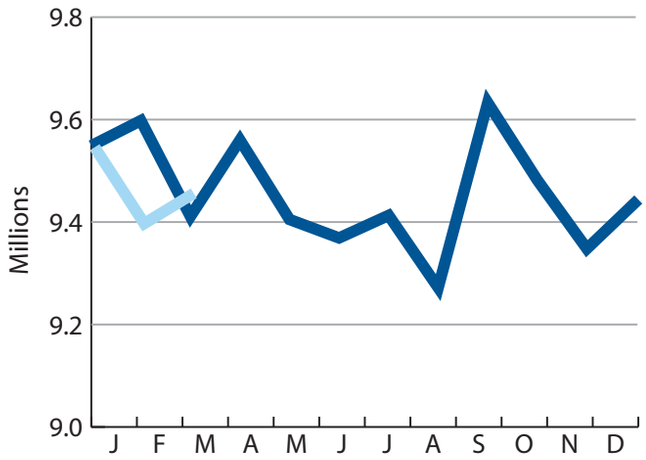
Manufacturing Production Worker Indicators

January 2005 to March 2006

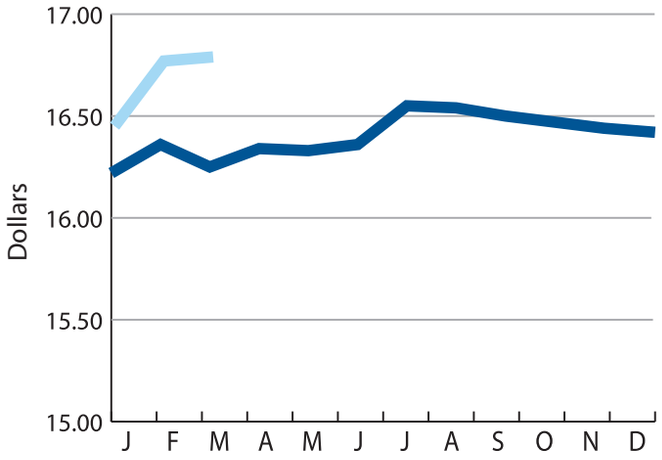
Average Weekly Hours



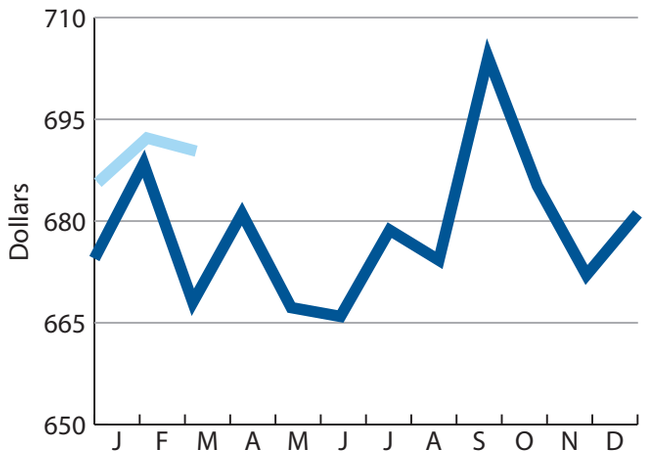
Total Production Hours



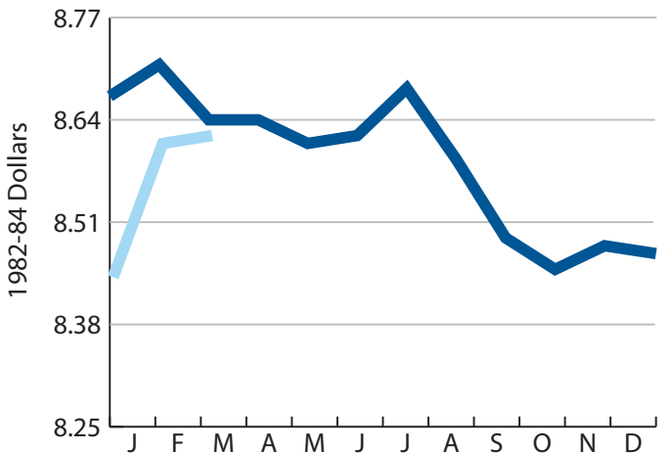
Average Hourly Earnings



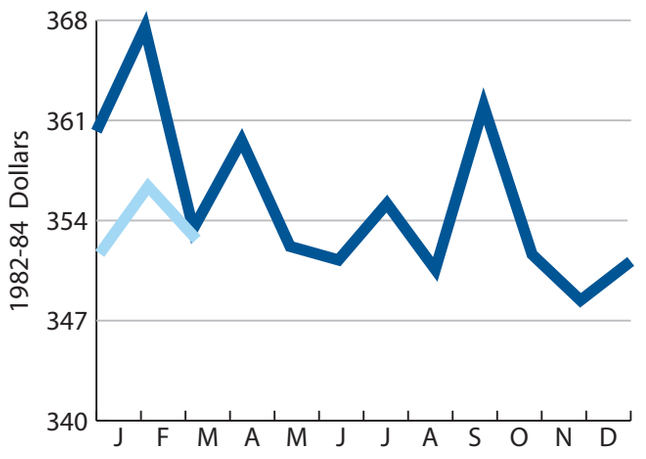
Average Weekly Earnings



Deflated Average Hourly Earnings



Deflated Average Weekly Earnings



2005 2006

Business Indicators

January 2005 to March 2006

	Single Family Housing Permits		New Business Incorporations		New Vehicle Registrations	
2005	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
January	3,273	3,806	1,416	1,652	41,683	47,807
February	3,371	3,912	2,023	1,844	35,224	45,757
March	4,610	4,280	2,309	1,924	49,342	46,205
April	4,702	4,159	1,886	1,711	50,892	46,651
May	5,030	4,522	1,831	1,744	51,113	46,344
June	5,300	4,574	1,718	1,647	51,400	44,692
July	4,456	4,207	1,612	1,637	50,320	45,469
August	4,495	4,071	1,852	2,019	61,923	55,338
September	3,986	4,111	1,648	1,676	50,986	46,512
October	3,890	3,929	1,516	1,559	45,636	45,050
November	3,472	4,259	1,329	1,625	32,194	40,809
December	3,282	3,807	1,653	1,687	33,105	40,323
2006						
January	3,368	3,916	1,715	2,001	42,165	48,360
February	3,546	4,116	1,762	1,606	36,957	48,009
March	4,287	3,981	2,185	1,821	48,908	45,798

Business Indicators (Continued)

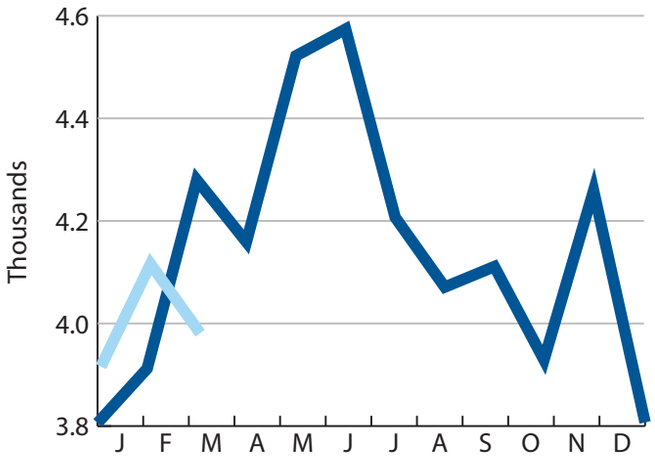
January 2005 to March 2006

	Taxable Retail Sales (Millions of Dollars)		Deflated Taxable Retail Sales (Millions of 1982-84 Dollars)	
2005	Unadjusted	Adjusted	Unadjusted	Adjusted
January	6,834	8,027	3,668	4,289
February	6,950	7,907	3,711	4,216
March	8,001	7,964	4,242	4,233
April	8,050	8,213	4,232	4,333
May	8,060	8,114	4,242	4,279
June	8,652	8,245	4,551	4,343
July	8,095	8,045	4,238	4,210
August	7,805	8,004	4,063	4,170
September	8,240	8,159	4,226	4,201
October	8,541	8,427	4,376	4,330
November	8,072	8,364	4,174	4,317
December	10,392	8,178	5,398	4,217
2006				
January	7,182	8,436	3,702	4,328
February	7,395	8,413	3,808	4,326
March	8,677	8,637	4,443	4,433

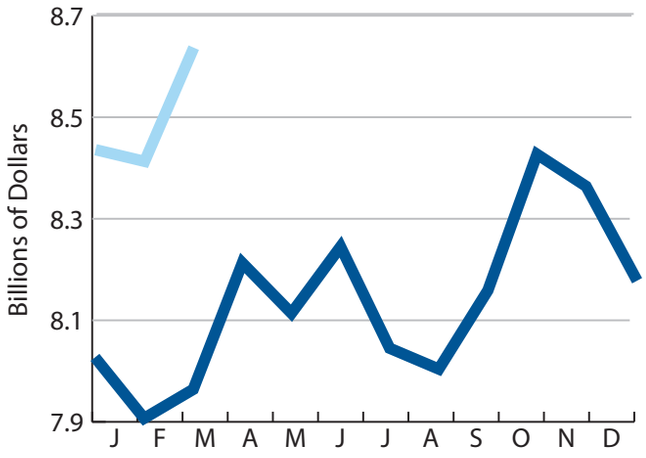
Business Indicators

January 2005 to March 2006

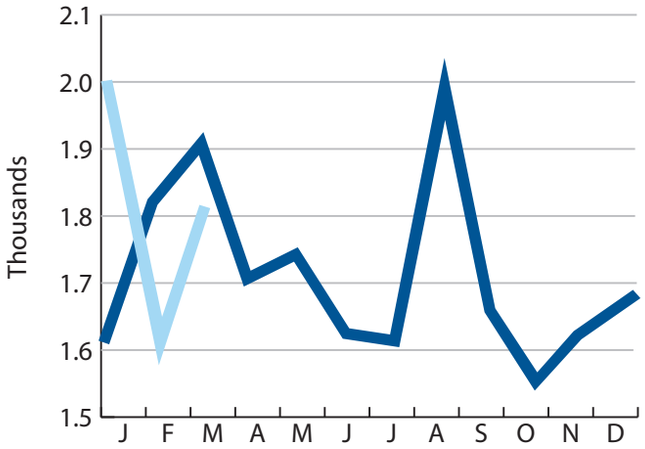
Single Family Housing Permits



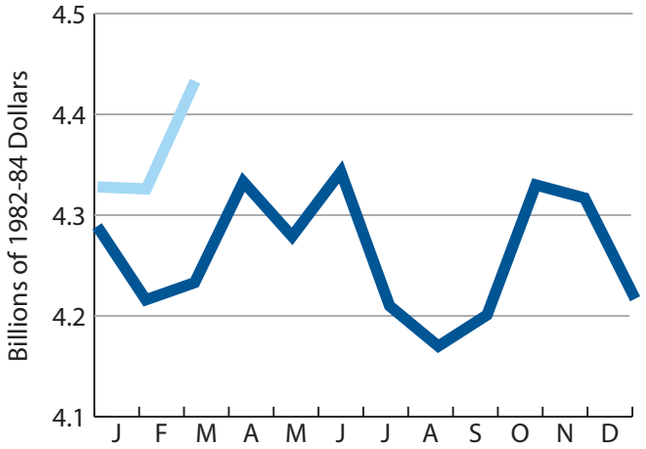
Taxable Retail Sales



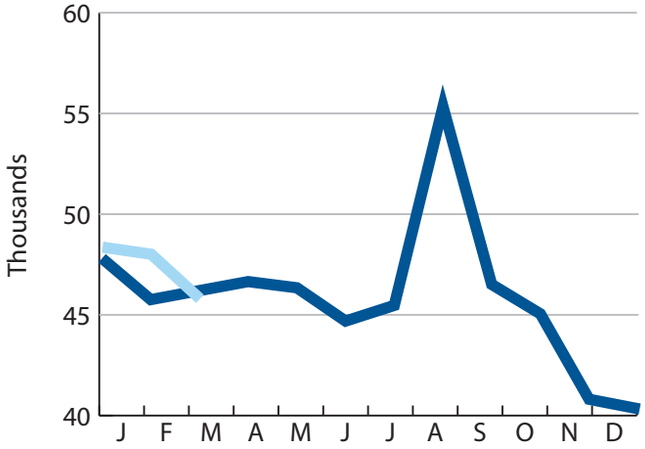
New Business Incorporations



Deflated Taxable Retail Sales



New Vehicle Registrations



2005 2006

DATA SUMMARY
JANUARY 2006 (SEASONALLY ADJUSTED DATA)

	January 2006	December 2005	January 2005	Percent & Direction of Change** December '05 - January '06	Percent & Direction of Change** January '05 - January '06
EMPLOYMENT					
*Nonag Wage & Salary Emp (000)	3,716.9	3,687.3	3,630.4	0.8 (+)	2.4 (+)
*Manufacturing Employment (000)	295.7	294.6	298.3	0.4 (0)	-0.9 (-)
*Total Unemployment Rate (%)	3.0	3.3	3.4	(+)	(+)
UNEMPLOYMENT INSURANCE					
Average Weekly Initial Claims‡	5,168	4,293	5,413	20.4 (-)	-4.5 (+)
Insured Unemployment Rate (%)	0.97	0.85	1.04	(-)	(+)
Final Payments	3,380	2,869	3,443	17.8 (-)	-1.9 (+)
MANUFACTURING PRODUCTION WORKERS					
*Average Weekly Hours	41.7	41.5	41.6	0.6 (+)	0.2 (0)
*Total Production Hours (000)	9,546	9,444	9,549	1.1 (+)	0.0 (0)
*Average Hourly Earnings ($)	16.45	16.42	16.22	0.2 (0)	1.4 (+)
*Average Weekly Earnings ($)	685.65	681.06	674.47	0.7 (+)	1.7 (+)
BUSINESS					
Single Family Housing Permits	3,916	3,807	3,806	2.9 (+)	2.9 (+)
New Business Incorporations	2,001	1,687	1,652	18.6 (+)	21.1 (+)
New Vehicle Registrations	48,360	40,323	47,807	19.9 (+)	1.2 (+)
Taxable Retail Sales ($M)	8,436	8,178	8,027	3.1 (+)	5.1 (+)

‡December 2005 corrected from the last issue.

DATA SUMMARY
FEBRUARY 2006 (SEASONALLY ADJUSTED DATA)

	February 2006	January 2006	February 2005	Percent & Direction of Change** January '06 - February '06	Percent & Direction of Change** February '05 - February '06
EMPLOYMENT					
*Nonag Wage & Salary Emp (000)	3,718.7	3,716.9	3,642.3	0.0 (0)	2.1 (+)
*Manufacturing Employment (000)	295.6	295.7	298.2	0.0 (0)	-0.9 (-)
*Total Unemployment Rate (%)	3.0	3.0	3.3	(0)	(+)
UNEMPLOYMENT INSURANCE					
Average Weekly Initial Claims	4,657	5,168	5,182	-9.9 (+)	-10.1 (+)
Insured Unemployment Rate (%)	0.86	0.97	0.97	(+)	(+)
Final Payments	3,141	3,380	3,468	-7.1 (+)	-9.4 (+)
MANUFACTURING PRODUCTION WORKERS					
*Average Weekly Hours	41.0	41.7	41.8	-1.7 (-)	-1.9 (-)
*Total Production Hours (000)	9,397	9,546	9,598	-1.6 (-)	-2.1 (-)
*Average Hourly Earnings ($)	16.77	16.45	16.36	1.9 (+)	2.5 (+)
*Average Weekly Earnings ($)	692.24	685.65	688.45	1.0 (+)	0.6 (+)
BUSINESS					
Single Family Housing Permits	4,116	3,916	3,912	5.1 (+)	5.2 (+)
New Business Incorporations	1,606	2,001	1,844	-19.7 (-)	-12.9 (-)
New Vehicle Registrations	48,009	48,360	45,757	-0.7 (-)	4.9 (+)
Taxable Retail Sales ($M)	8,413	8,436	7,907	-0.3 (0)	6.4 (+)

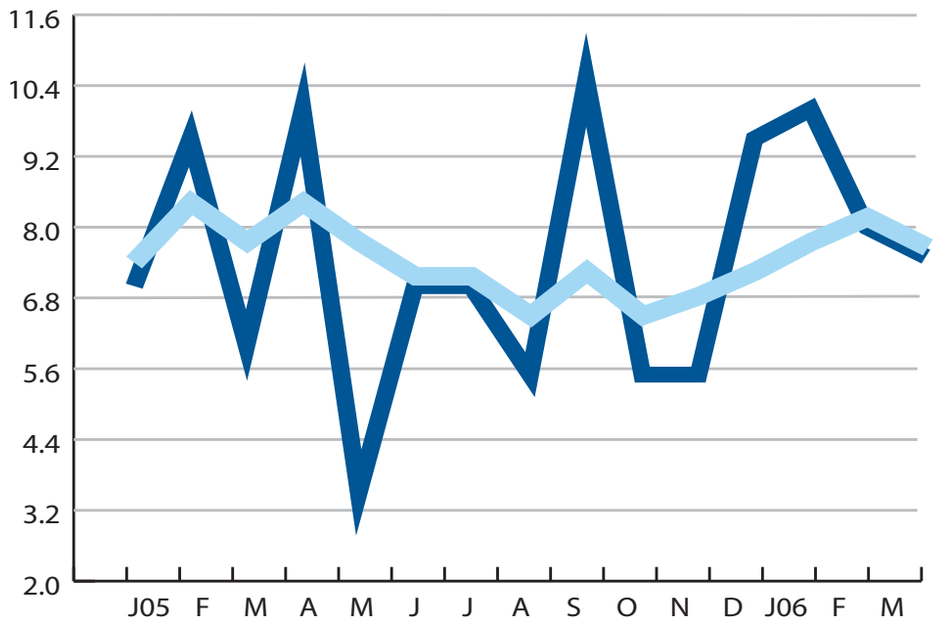
DATA SUMMARY
MARCH 2006 (SEASONALLY ADJUSTED DATA)

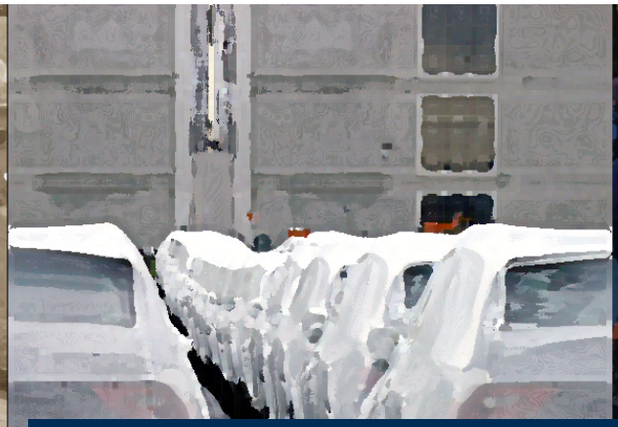
	March 2006	February 2006	March 2005	Percent & Direction of Change** February '06 - March '06	Percent & Direction of Change** March '05 - March '06
EMPLOYMENT					
*Nonag Wage & Salary Emp (000)	3,721.3	3,718.7	3,639.5	0.1 (0)	2.2 (+)
*Manufacturing Employment (000)	297.0	295.6	297.6	0.5 (0)	-0.2 (0)
*Total Unemployment Rate (%)	3.1	3.0	3.4	(-)	(+)
UNEMPLOYMENT INSURANCE					
Average Weekly Initial Claims	4,899	4,657	5,516	5.2 (-)	-11.2 (+)
Insured Unemployment Rate (%)	0.79	0.86	0.93	(+)	(+)
Final Payments	2,746	3,141	3,796	-12.6 (+)	-27.6 (+)
MANUFACTURING PRODUCTION WORKERS					
*Average Weekly Hours	41.0	41.0	41.0	-0.1 (0)	0.0 (0)
*Total Production Hours (000)	9,456	9,397	9,411	0.6 (+)	0.5 (0)
*Average Hourly Earnings ($)	16.79	16.77	16.25	0.1 (0)	3.3 (+)
*Average Weekly Earnings ($)	690.31	692.24	668.03	-0.3 (0)	3.3 (+)
BUSINESS					
Single Family Housing Permits	3,981	4,116	4,280	-3.3 (-)	-7.0 (-)
New Business Incorporations	1,821	1,606	1,924	13.4 (+)	-5.4 (-)
New Vehicle Registrations	45,798	48,009	46,205	-4.6 (-)	-0.9 (-)
Taxable Retail Sales ($M)	8,637	8,413	7,964	2.7 (+)	8.4 (+)

** Revised to 1st Quarter 2005 benchmarks.*
*** (+) Favorable, (-) Not Favorable, (0) Change between +/- 0.5%.*

NUMBER OF SERIES MOVING FAVORABLY

Plus One–Half the Number Unchanged





The Legacy Domestic Automobile Manufacturers: Where Are They and How Did They Get There?

George E. Hoffer
Department of Economics, Virginia Commonwealth University

Editor's Notes:

For this issue's feature article, we are indeed fortunate to have "The Legacy Domestic Automobile Manufacturers: Where Are They and How Did They Get There?" by Dr. George E. Hoffer of the Department of Economics of Virginia Commonwealth University. Dr. Hoffer is a nationally renowned transportation expert who has had articles published in such publications as *Automotive News*, *The Wall Street Journal*, and *New York Times* and is widely cited academically and quoted regularly by the media on automotive topics. The automobile industry comprises almost half of transportation equipment employment in Virginia, and the transportation equipment industry is now Virginia's largest factory employer with approximately 40,000 jobs. We greatly appreciate Dr. Hoffer graciously agreeing to do this article for *Virginia Economic Indicators,* and we are sure our readers will be enlightened by it.

Today one finds it hard to believe that barely 30 years ago the U.S. Congress was considering both a vertical and horizontal dismemberment of General Motors. In those heady, pre-embargo days in the domestic auto industry, GM's share of the U.S. market was 55 percent.[1] Currently, the legacy domestic manufacturers (the old Big 3: General Motors, Ford, and Chrysler) in total have a lower light vehicle market share than GM did 33 years ago. In terms of market share, but not units, the domestic industry has in effect lost American Motors, Chrysler, and Ford. Most recently, for the first time a non-legacy manufacturer, Toyota, has outsold one of the Big 3.

In this article, we will examine the factors which have led to the legacy manufacturers' current state. While doing so, we will critically comment on some steps they have taken to address the present situation.

The Motor Vehicle Industry in the U.S.

Unlike many other manufacturing industries, the U.S. is not losing its domestic motor vehicle industry. Overall, the last six years have been the healthiest in its 106-year history. The obvious problem is that all firms have not shared in this prosperity. Of the 17 million light vehicles sold in the U.S. in 2005, 16.3 million were manufactured in North America.[2] In the U.S. alone, production of light vehicles between 1970 and 2005, increased by 45 percent, from 8.3 million to 12 million units.[3] Excluding Canadian and Mexican only producers, the number of U.S. producers has increased from six to thirteen, while the four-firm concentration ratio has declined from 91 to approximately 70.[4]

The table above shows the 2005 sizes of the American, Canadian, European, and Japanese markets, as well as import brand penetration in each market. In the U.S., last year's 17 million units just missed being the second-best year in motor vehicle history. Its size, openness and growth make the U.S. the world's premier single market.

Compare it with the Japanese home market. In the late 1980s, Japan's domestic market was over one-half that in size of the U.S. Currently, it is only one-third that of the U.S. This declining Japanese home market explains in part why the Japanese-based manufacturers have been so aggressive abroad.

The table below also shows the openness of the U.S. and Canadian markets. Import brands last year captured approximately 44 percent of these markets. Compare this to the less than 5 percent import penetration of the Japanese home market. The fall of the Iron Curtain, European economic integration, and declining trade barriers have resulted in import penetration in Europe increasing from well under 10 percent to the present 23 percent over the last 15 years.

Import Market Shares and Market Size in Selected World Markets, 2005

Market	Import Market Share	Market Size
U.S.	43.1%	17.0 mil
Europe	23.0%	15.2 mil
Japan	4.6%	5.7 mil
Canada	44.4%	1.6 mil

Source: *Automotive News*, various issues.

How Did the Domestic Industry Get into Its Present Situation?

The present situation has been 30 years in the making, as each of the Big 3 have gone in and out of crisis since the mid-1970s. Each firm has gone through multi-"fixes." Each "fix" has followed a common template. First announce a downsizing. Then do a combination of the following:

- close parts and/or assembly plants
- downsize the white- and blue-collar workforce
- divest ancillary lines of business
- consolidate the parts and new vehicle distribution system (eliminate Oldsmobile and Plymouth, and consolidate Jeep/Chrysler/Dodge and Buick/Pontiac/GMC).

Generally, each crisis coincided with an economic downturn. The latter point is critical. For invariably, several months after the restructuring announcement, the economy would recover and motor vehicle sales would recover. However, with each cycle, the Big 3 never fully regained the lost market share. Increased volumes and a richer mix of vehicles (increasing volumes of high margin trucks) went straight to the Big 3's bottom line. All seemed well. All seemed well until the next downturn, or a change in consumer preferences to a lower margin vehicle type (read: small cars).

A reasonable analogy can be made between the problems faced by the legacy domestic air carriers and auto manufacturers. From the late 1930s until the late 1970s entry was effectively blocked in both industries. In the domestic airline industry government regulation (the Civil Aeronautics Board) essentially blocked new entry. In the domestic motor vehicle industry, entry was effectively blocked by exceedingly high barriers to entry (high capital costs, brand name capital, …). Whenever entry is blocked, labor tends to be the primary beneficiary as higher labor costs can be passed forward, given that all firms in the industry negotiate with the same unions[5] and the demand for the good or service is inelastic.

In the airline industry, after several false starts, the new entrants, without the labor legacy costs, gained their foothold through price competition. When forced to price compete, the legacy firms went bankrupt. So in the airline industry lower costs were translated to lower fares.

New entry in the U.S. automobile industry has come from established firms abroad who were oligopolists

in their home country. As such they entered the U.S. market well up their learning curves and well down their long-run average cost curves. Entering the U.S. market with scale economies and no legacy costs, once here, they chose not to compete on price (the Koreans being the most obvious exception, initially). The lower costs of the new entrants have not translated to lower prices, but instead have been manifested in more frequent restylings and their continual entry into new market segments.

Styling as a Market Weapon

The new entrants continually freshened product has been well received by American consumers. New product sells. Millner and Hoffer[6] found that if one firm restyled its product (say Toyota restyled the Corolla) and its competitor stands pat (say Chevrolet did not restyle its Cobalt), in the year of the Corolla restyling, Corolla sales increase 64 percent *compared to the unrestyled Cobalt*. The literature has referred to this behavior as using styling competition as a market weapon. In essence, for the last 25 years, the Asians have done to the Big 3 what the Big 3 did to the independent U.S. automotive producers in the 1950s. In large part, this explains why firms which have had the most active new product programs over the last decade, such as Hyundai/Kia and Nissan, have had the greatest increases in market shares.

Cyclic End of the Truck-Based Sports Utility Vehicle (SUV) Craze

Other factors have contributed to create what GM President Rick Wagoner has characterized "the perfect storm." Most important to the bottom line has been the cyclic end of the truck-based sport utility vehicle frenzy. Niche market segments tend to have an eight-to-ten-year vibrancy. The "pony cars" of the 1960s (Mustang, Camaro, Javelin, …), the vinyl-roofed sport coupes of the 1980s (Cutlass, Monte Carlo, Cordova, …) were two such "shooting star" markets. Unfortunately, for the Big 3, by the mid-2000s, the high-profit, mid-size sport utility segment (Ford Explorer, Jeep Grand Cherokee, …) became long in the tooth. A one-unit decline in their segment impacts the bottom line essentially as much as an eight-unit decline in the subcompact segment.

Excessive Reliance on Incentives?

Some have cited the Big 3 pricing policies of heavy reliance on incentives as being part of the problem. Given the short-run

cost structure faced by the Big 3, I think their pricing policies have been rational. Seventy years of negotiations with the U.A.W. have resulted in labor being essentially a fixed cost for the last decade. Given the high fixed cost and low variable cost of assembling an additional vehicle, rational short-run profit maximizing behavior suggests that you assemble the vehicle and then do whatever it takes to sell it. This policy is especially attractive in the light truck market where margins are much greater, and therefore multi-thousand dollar incentives can cut through the advertising clutter. Combine this cost structure with the manufacturers' pricing policies of reducing their franchisees' mark ups (profit margin) sets the stage for manufacturers to micro-manage prices through continuous new vehicle incentive programs.

GM's current, "value pricing" program is more of the same. Almost half of GM's Manufacturer's Suggested Retail Price (MSRP) reductions in January 2006 have come out of GM dealers' profit margins. Ford has announced a similar pricing program for many 2007 model year vehicles. In percentage terms, between 1978 and 2006, the Buick dealers' profit margin in the full-size Lesabre sedan (now Lucerne) has declined by 75 percent. Interestingly, non-Big 3 manufacturers have been slow to adopt "value pricing" as a ploy to slow perceived price increases. For instance, while the Buick Lucerne and Toyota Avalon compete in the same "large car" market, the Toyota dealer has over twice the profit margin in the base vehicle as does the Buick dealer.[7]

When profit margins were significantly higher, franchised dealers engaged in extensive first-degree price discrimination to clear the market. Today, factory incentives, be it in the form of cash, subvented interest rates, or subvented leases,

have largely replaced first-degree price discrimination. While manufacturers publicly posture that "value pricing" will lessen reliance on incentives, the history of the last 25 years shows just the opposite.

Quality Issues

The most oft-cited factor in explaining the Big 3's decline is the quality issue. Numerous proprietary and nonproprietary studies, as well as common wisdom, have cited the higher quality of Japanese firms' products. While not questioning here the studies themselves, one raises the issue of how is quality measured? Is it in terms of dollar cost or number of problems?

The Consumers Union "frequency of repair" data base, is the best known, has the largest number of observations, and spans the longest time period. Until 1993, Consumers Union reported two measures of motor vehicle quality for each model—a "trouble index" (number of problems) and a "cost index" (cost of repairs and maintenance).[8] True to conventional wisdom, every Japanese-based manufacturer had a statistically significantly better frequency of repair record (trouble index) than each Big 3 manufacturer. However, if one looked one row lower at "cost," every Big 3 firm bested every Japanese-based manufacturer. In terms of maintenance and repair costs, Big 3 vehicles were actually of higher quality. Remember, these were late 1980's – early 1990's American vehicles. Everyone acknowledges that Big 3 vehicles have improved both absolutely and relatively since then.

When asked in early 2006 why CU no longer reported the repair cost measure, David Champion, director of *Consumer Reports'* Auto Test Center said it was "… because it was found owner behavior varied too much between brands."[9] But that exactly explains why domestic vehicles are less costly to maintain—owners have more choices in servicing their vehicles.

Lower Resale Values

Lower resale values have been forwarded as another factor contributing to the current Big 3 malaise. Perceived more rapid depreciation

makes Big 3 vehicles less attractive to the new vehicle purchaser, but more attractive in used vehicle markets. As an example, in current auction markets, a one- year-old Nissan Altima 4 or Toyota Camry 4 commands a price over 30 percent higher than a comparable Chevrolet Malibu V6.[10]

In large part, this problem can be traced to the cost structure discussed above. Disproportionately high fixed costs lead manufacturers to produce products for rental fleets. When these program vehicles reach the used-vehicle auctions six to twelve months later under guaranteed buy-back programs, the increased supply lowers price. With longer lags, the same is true of domestic and luxury import brand vehicles placed into service under subvented lease programs.

The Big 3 have recognized this circular problem, but given current cost structures, it is hard to change. For the 2006 model year, GM has said it is cutting daily rental sales. For the 2007 model year, Ford has announced fleet price increases. These policy changes by the Big 3 are sustainable only if their retail sales do not continue to deteriorate. Time will tell, but earlier attempts all failed in the face of deteriorating retail volumes. Real progress on this front will be made only when and if the ratio of variable to fixed cost increases significantly.

Little Goodwill or Brand Name Capital in Big 3 Model Names

A complicating factor when the Big 3 restyle a model is that they perceive it necessary to concurrently rename it. The Chevrolet Cavalier becomes the Cobalt; the Buick Century/Regal become the Lacrosse; the Buick Lesabre/Park Avenue become the Lucerne … When Honda restyles the Civic or Toyota the Camry, they only need to "educate" the public about the newly introduced vehicles' attributes. The car market knows in which sector the Civic and Camry compete.

Because the Big 3 perceive that there is little goodwill left in their model names, newly restyled vehicles are given new nomenclatures. The general car-buying public has little knowledge in which markets do the Ford Freestyle, Ford Five Hundred, or Chevrolet Uplander compete. This explains in part why consistently, newly introduced Big 3 products have been slow to get traction as compared to Japanese, European, or even Korean products.

Similarly, model name proliferation compounds the Big 3 traction problem. In the 1960s, seven distinct body styles in a minimum of three trim lines all carried the "Chevrolet" marque. Today the 4-door is called the "Impala," the 2-door, a "Monte Carlo." The 4-door new large Ford is a "Five Hundred"; the station wagon is a "Freestyle." The Big 3 advertising budgets are not large enough to establish even a minimal degree of brand recognition when you combine model name proliferation with ever-changing nomenclature.

Investing in Large Trucks

In light of recent trends in motor fuel prices, the Big 3 have been criticized for continuing to invest in the mid-size and larger pickup truck and SUV markets. Such investment is rational behavior. Given the profit margins in mid-size and large trucks compared to those even in mid-size cars, the investment is rational.

In 2006, the American consumer has at least 37 distinct vehicle makes from which to choose. The introduction of a new car by the Big 3 can readily be met by comparable new products from the litany of competitors. But if a Big 3 firm introduces a new large SUV or pickup, only four manufacturers in the world could match the introduction. Pricing power is much stronger for the Big 3 in the latter markets. The quickest and most certain way to stabilize the bottom line is to have strong entries in the large truck market, even if it is a declining market segment. Such is the reasoning of the Big 3 and Toyota as they shorten the lifecycle of their largest light vehicle truck products.

[1] United States, Senate, Committee on the Judiciary, Subcommittee on Antitrust and Monopoly, *A Reorganization of the U.S. Automobile Industry*, 93d Congress, 2nd session, (Stanley E. Boyle) U.S. Government Printing Office, Washington: 1974.

[2] *Automotive News*, December 26, 2005, p. 30, and January 9, 2006, p. 40. Since the mid-1960s, Canadian and U.S.-built vehicles have been considered to be domestic in either country.

[3] Wards, *Motor Vehicle Facts and Figures 2001* (Southfield MI, 2001), p. 3; *Automotive News*, December 26, 2005, p. 30.

[4] U.S. Senate, p. 19; *Automotive News*, January 9, 2006, p. 40.

[5] While Delta was for the most part a non-union carrier, its pay pattern paralleled the organized firms.

[6] Edward L. Millner and George E. Hoffer, "A Re-examination of the Impact of Automotive Styling on Demand," *Applied Economics*, 25 (1993), pp. 101-110.

[7] Consumers Union, "Consumer Reports Annual Auto Issues," April 1977-2006; *Consumers Guide*, "Car & Truck Test Monthly," December 2005, KBB.com.

[8] Consumers Union, "Consumer Reports, The 1992 Cars," April 1992, pp. 251-68.

[9] Ted Craig, "Imports High on Shopping Lists," *Used Car News* (February 20, 2006), pp. 1, 34.

[10] "Auction Net," *Used Car News*, Vol. 12, No. 3 (May 1, 2006), p. 58.

Historical Summary

Performance of Indicators Over the Business Cycle

For those interested in studying the business cycle in Virginia, this publication includes several of the economic time series for which data is readily available on a monthly basis. From time to time, new series will be added and, if necessary, others presently included will be discontinued.

Business Cycle Turning Points

The beginning of a recession is defined as the month when aggregate economic activity in the U.S. reaches a cyclical high, from which it begins to turn down, and the end as the month when it reaches a cyclical low, from which it begins to turn up. On November 26, 2001, the National Bureau of Economic Research (NBER) announced a recession had begun in March 2001. On July 17, 2003, NBER announced the recession ended in November 2001.

Seasonal Adjustment

To correlate changes in a time series and changes in the business cycle, it is desirable to eliminate, insofar as possible, the effect of irrelevant factors from the data comprising the series. All series currently published in the *Virginia Economic Indicators* have been adjusted to minimize regular seasonal fluctuations in the data in order to show only activity related to the business cycle.

Historical Graphs

Historical graphs are published in the back of the fourth quarter issue for each year.

Data Sources

U.S. Census Bureau:
- Single Family Housing Permits

Virginia Department of Motor Vehicles:
- New Vehicle Registrations

Virginia Department of Taxation:
- Deflated Taxable Retail Sales
- Taxable Retail Sales

Virginia Employment Commission:
- Average Hourly Earnings
- Average Weekly Earnings
- Average Weekly Hours
- Average Weekly Initial Claims
- Deflated Average Hourly Earnings
- Deflated Average Weekly Earnings
- Insured Unemployment Rate
- Manufacturing Employment
- Nonagricultural Wage and Salary Employment
- Total Production Hours
- Total Unemployment Rate
- Unemployment Insurance Final Payments

Virginia State Corporation Commission:
- New Business Incorporations

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